INTERNATIONAL SEARCH REPORT

A. CLASSIFICATION OF SUBJECT MATTER IPC 7 B01J23/10 B01J B01J37/03 C10G11/04 B01J29/06 B01J37/04 C10G11/05 According to International Patent Classification (IPC) or to both national classification and IPC Minimum documentation searched (classification system followed by classification symbols) IPC 7 B01J C10G Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched Electronic data base consulted during the international search (name of data base and, where practical, search terms used) EPO-Internal, WPI Data C. DOCUMENTS CONSIDERED TO BE RELEVANT Category Citation of document, with indication, where appropriate, of the relevant passages Relevant to claim No. X US 5 364 516 A (KUMAR RANJIT ET AL) 1-3,5-715 November 1994 (1994-11-15) column 1, line 67 - column 2, line 30 column 2, line 59 - column 3, line 7 Y 1-7 examples 2-5; tables I,II claim 1 US 4 921 824 A (CHIN ARTHUR A ET AL) 1-7 1 May 1990 (1990-05-01) column 1, line 6 - line 12 column 2, line 16 - line 24 column 3, line 50 - line 59 claim 12; examples 5,11 Υ EP 0 554 968 A (GRACE W R & CO) 1-7 11 August 1993 (1993-08-11) cited in the application claim 1; figures Further documents are listed in the continuation of box C. Patent family members are listed in annex. Special categories of cited documents: *T* later document published after the international filing date or priority date and not in conflict with the application but *A* document defining the general state of the art which is not considered to be of particular relevance cited to understand the principle or theory underlying the invention "E" earlier document but published on or after the international *X* document of particular relevance; the ctaimed invention cannot be considered novel or cannot be considered to filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) involve an inventive step when the document is taken alone "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such docu-'O' document referring to an oral disclosure, use, exhibition or ments, such combination being obvious to a person skilled in the art. other means document published prior to the international filing date but later than the priority date claimed "&" document member of the same patent family Date of the actual completion of the International search Date of mailing of the international search report 15 March 2005 05/04/2005 Name and mailing address of the ISA Authorized officer European Patent Office, P.B. 5818 Patentlaan 2 NL – 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016 Besselmann, S

INTERNATIONAL SEARCH REPORT

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Internation No PCT/EP2004/013911

Patent document cited in search report		Publication date		Patent family member(s)	Publication date
US 5364516	Α	15-11-1994	US	5248642 A	28-09-1993
			CA	2094889 A1	28-10-1993
			DE	69300756 D1	14-12-1995
			DE	69300756 T2	09-05-1996
			EP	0568170 A1	03-11-1993
			ES	2079941 T3	16-01-1996
			JP	6136369 A	17-05-1994
			JP	8023022 B	06-03-1996
			ΑU	4459593 A	17-02-1994
			KR	272870 B1	15-11-2000
US 4921824	 А	01-05-1990	CA	2075820 A1	01-10-1991
			EP	0521848 A1	13-01-1993
			WO	9115557 A1	17-10-1991
EP 0554968	Α	11-08-1993	US	5288675 A	22-02-1994
			CA	2088966 A1	06-08-1993
			DE	69314819 D1	04-12-1997
			DE	69314819 T2	10-06-1998
			EP	0554968 A1	11-08-1993
			ES	2108815 T3	01-01-1998
			JP	2609502 B2	14-05-1997
			JP	6134297 A	17-05-1994
			SG	50465 A1	20-07-1998
			US	5407878 A	18-04-1995
			US	5399327 A	21-03-1995
			US	5627123 A	06-05-1997
			AU	665836 B2	18-01-1996
			ΑU	4198193 A	21-04-1994